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LIOU, ERIC				
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3628				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/731,228

Applicant(s)

BRAMNICK ET AL.

Examiner

Eric Liou

Art Unit

3628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6, 10-19 and 23-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 10-19, and 23-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/06)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/29/07 has been entered.

Response to Arguments

1. Applicant submits, "[The] cited references fail to disclose or suggest any system or method for determining who in a list of passengers is to be bumped or rebooked and how to deal with the list, where the passengers include those without seats and volunteers." As discussed in the *KSR International Co. v. Teleflex Inc. et al.*, 550 U.S. ____ (2007), "[o]ften, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit. See *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006) ('[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness'). As our precedents make clear, however, the analysis need not seek out precise teachings directed to the specific subject matter of the

challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ” (emphasis added). Here, the scenario where there are passengers including those without seats and volunteers is old and well known as evidenced by Arthur (Arthur: pg. 283, “ticket holders bumped voluntarily” are considered passengers without seats; pg. 293, “contender would give up the seat and wait until the next available one”). A list of passengers used for re-accommodation purposes is known in the art and taught by Slivka (*see* discussion *infra* claim 1). In Slivka, these passengers have had their flights cancelled, or otherwise disrupted and thus need to be re-accommodated. In Arthur, passengers are already booked and either voluntarily or involuntarily give up their seats, necessitating rebooking. A method for how to deal with the list of passengers (1) to be rebooked is taught by Slivka (*see* discussion *infra* claim 1), and (2) to be bumped is taught by Arthur (pg. 293). From these teachings, it would have been obvious to a person of ordinary skill in the art to apply a known technique to these known elements to assemble Applicant’s invention to achieve a predictable result.

2. Applicant’s arguments regarding the newly added tie-breaking scenarios in claims 1, 14, and 16 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In this instance, claims 1, 14, and 16 recite the limitations, “when only one available seat on the commercial flight remains and two of said passengers without seats prefer to fly on the commercial flight and are equally ranked, the available seat is assigned to the one of said two passengers without seats having the higher lifetime value to the commercial airline, and when one available seat on the commercial flight remains and two of said volunteers prefer to accept said incentive and are equally ranked, the one of said two volunteers having the higher lifetime value is selected to be rebooked and receive the incentive.” Paragraphs 0016-0018 of Applicant’s specification, which appear the most relevant to the above limitations, merely describe using rules to select passengers based on passenger financial data, lifetime data, and descending revenue impact. Nowhere in Applicant’s specification is there any mention of passenger selections under the specific case when two passengers are equally ranked. Moreover, Applicant’s specification as originally filed would not have conveyed to one skilled in the art the recited conditional clauses of Applicant’s invention as described above.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. The term "likely to be" in claims 1, 14, and 16 is a relative term which renders the claim indefinite. The term "likely to be" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The Examiner interprets the term "likely to be" to mean that the passengers have been denied.

8. Claims 1, 14, and 16 recite the limitation, "when one available seat on the commercial flight remains and two of said volunteers prefer to accept said incentive and are equally ranked, the one of said two volunteers having the higher lifetime value is selected to be rebooked and receive the incentive." It is unclear why it is necessary to accept volunteers to give up a seat when there is already an available seat.

9. Claims 1, 14, and 16 recite the conditional limitations, "when only one available seat on the commercial flight remains and two of said passengers without seats prefer to fly on the commercial flight and are equally ranked, the available seat is assigned to the one of said two passengers without seats having the higher lifetime value to the commercial airline, and when one available seat on the commercial flight remains and two of said volunteers prefer to accept said incentive and are equally ranked, the one of said two volunteers having the higher lifetime value is selected to be rebooked and receive the incentive." It is unclear what the course of action is when the conditional clauses are not true. For example, it is unclear what occurs when

more than one available seat or no available seats are present and when two of said passengers without seats or volunteers are not equally ranked.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1-4, 6, 10, 12-19, 23, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slivka et al., U.S. Publication No. 2003/0225600 in view of Ingram, "Travellers Leave for Portugal after 24-hour Wait for Plane", The Globe and Mail (Canada), June 26, 1986, pg. A21 in view of Arthur et al., "Optimal Overbooking", The UMAP Journal 23(3), 2002, pg. 283-300 and further in view of Quick Stats, "NFL Tie-Breaker Procedures", accessed at <http://web.archive.org/web/20020616022002/http://quickstats.com/nfl/wildcard.htm>, [hereinafter Quick Stats].

12. **As per claims 1, 14, and 16**, Slivka discloses a method, a system, and computer-readable storage (Slivka: Figure 1; paragraph 0018) for rebooking passengers when seats on a commercial airline flight flown by a commercial airline are overbooked, comprising the steps of:

storing passenger data for each passenger booked on said flight (Slivka: paragraphs 0032-0034);

determining a number of passengers likely to be denied boarding (Slivka: paragraphs 0014; 0036, “re-accommodation driver 111 may retrieve a Passenger Name Record (PNR) list associated with the disrupted flight...”; The denied passengers may be due to a cancelled flight.);

determining denied boarding candidates for said flight (Slivka: Fig. 2; paragraph 0036, “Following an airline flight disruption (e.g., operational disruption), an airline entity, travel agent, or other travel based entities, may determine to re-accommodate disrupted passengers.”);

for each denied boarding candidate, using said passenger data to compute a cost of rebooking said denied boarding candidates, said rebooking cost being a cost of paying for the denied boarding candidate to travel on a different flight flown by a different commercial airline (Slivka: paragraphs 0007; 0015, “minimizes the provider cost of moving passengers to a different airline”; The Examiner notes, re-accommodating a passenger according to passenger revenue and minimizing the provider cost of moving passengers to a different airline suggests performing the step of computing the cost of a denied boarding candidate to travel on a different flight flown by a different commercial airline.);

for each denied boarding candidate, using said passenger data to compute a lifetime value to the commercial airline of the denied boarding candidate (Slivka: paragraph 0006, “...value established by airlines, ancillary services, and/or commodities, such as hotel and car reservations.”; paragraphs 0033-0035);

for each denied boarding candidate, computing a financial value of the denied boarding candidate based upon the lifetime value of the denied boarding candidate and the cost of rebooking the denied boarding candidate (Slivka: paragraphs 0033-0035; 0037-0038; Slivka teaches computing a PNR value for each passenger that may be based, in part, on from an actual

fare amount the disrupted passenger previously paid for the disrupted flight. Slivka does not explicitly teach a cost of the incentive and a rebooking cost in calculating the PNR value. However, any difference between the recited cost data in the claims (a cost of the incentive and the cost of rebooking) and the cost data taught by Slivka (fare amount the disrupted passenger previously paid for the flight) is solely found in the non-functional descriptive material of the cost data. Non-functional descriptive material cannot lend patentability to an invention that would have otherwise been anticipated by the prior art. *In re Ngai*, 367 F.3d 1336, 1339; 70 USPQ2d 1862, 1864 (Fed. Cir. 2004); *cf. In re Gulack*, 703 F.2d 1381, 1385; 217 USPQ 401, 404 (Fed. Cir. 1983) (when descriptive material is not functionally related to the substrate, the descriptive material will not distinguish the invention from the prior art in terms of patentability);

comparing said passenger data for said denied boarding candidates and ranking each denied boarding candidate according to the financial values of each of the denied boarding candidates (Slivka: paragraph 0046, “the PNR list obtained in step 220 may be sorted in a particular order (e.g., descending order) based on PNR value”); and

selecting passengers for said flight based on said ranking of said denied boarding candidates and said determined number (Slivka: paragraphs 0036;0045-0046; The disrupted passengers on the ranked PNR list are re-accommodated.);

13. Slivka does not disclose wherein said candidates comprise passengers without a seat and volunteers offering to give up their seat in exchange for an incentive; a cost, including lodging and meals, to accommodate the denied boarding candidate until the denied boarding candidate can be flown on a later flight flown by the commercial airline; the rebooking cost being the lesser of a cost of paying for the denied boarding candidate to travel on a different flight flown

by a different commercial airline or a cost, including lodging and meals, to accommodate the denied boarding candidate until the denied boarding candidate can be flown on a later flight flown by the commercial airline; selecting passengers for said flight such that when only one available seat on the commercial flight remains and two of said passengers without seats prefer to fly on the commercial flight and are equally ranked, the available seat is assigned to the one of said two passengers without seats having the higher financial value to the commercial airline, and when one available seat on the commercial flight remains and two of said volunteers prefer to accept said incentive and are equally ranked, the one of said two volunteers having the higher lifetime value is selected to be rebooked and receive the incentive.

14. Ingram discloses a cost, including lodging and meals, to accommodate the denied boarding candidate until the denied boarding candidate can be flown on a later flight flown by the commercial airline (Ingram: paragraph 0003).

15. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method, system, and computer-readable storage of Slivka to have included a cost, including lodging and meals, to accommodate the denied boarding candidate until the denied boarding candidate can be flown on a later flight flown by the commercial airline as disclosed by Ingram for the advantage of accommodating passengers in a way that provides customer satisfaction.

16. The Examiner notes, Slivka in view of Ingram discloses a cost of paying for the denied boarding candidate to travel on a different flight flown by a different commercial airline and a cost, including lodgings and meals, to accommodate the denied boarding candidate until the denied boarding candidate can be flown on a later flight flown by the commercial airline as

described above. Slivka in view of Ingram does not explicitly disclose the rebooking cost being the lesser of a cost of paying for the denied boarding candidate to travel on a different flight flown by a different commercial airline or a cost, including lodging and meals, to accommodate the denied boarding candidate until the denied boarding candidate can be flown on a later flight flown by the commercial airline. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method, system, and machine readable storage of Slivka in view of Ingram to have included selecting the lesser cost of the two alternatives as the rebooking cost for the advantage of selecting a solution that will benefit a company the most financially.

17. Slivka in view of Ingram does not disclose wherein said candidates comprise passengers without a seat and volunteers offering to give up their seat in exchange for an incentive; selecting passengers for said flight such that when only one available seat on the commercial flight remains and two of said passengers without seats prefer to fly on the commercial flight and are equally ranked, the available seat is assigned to the one of said two passengers without seats having the higher financial value to the commercial airline, and when one available seat on the commercial flight remains and two of said volunteers prefer to accept said incentive and are equally ranked, the one of said two volunteers having the higher lifetime value is selected to be rebooked and receive the incentive.

18. Arthur discloses wherein said candidates comprise passengers without a seat and volunteers offering to give up their seat in exchange for an incentive (Arthur: pg. 283, "ticket holders bumped voluntarily" are considered passengers without seats.; pg. 293, The contender would give up a seat and wait until the next available one. The airline would compensate the

passengers who required the least money and require that they give up their seats.); selecting passengers for said flight such that when one available seat on the commercial flight remains and two of said volunteers prefer to accept said incentive, the one of said two volunteers having the higher lifetime value is selected to be rebooked and receive the incentive (Arthur: pg. 293, “Voluntary Bumping: Auction Methods”, “The airline would compensate the passengers who required the least money and require that they give up their seats.”).

19. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method, system, and computer-readable storage of Slivka in view of Ingram to have included wherein said candidates comprise passengers without a seat and volunteers offering to give up their seat in exchange for an incentive; and when one available seat on the commercial flight remains and two of said volunteers prefer to accept said incentive and are equally ranked, the one of said two volunteers having the higher lifetime value is selected to be rebooked and receive the incentive as disclosed by Arthur for the advantage of selecting those passengers for compensation in an overbooking situation that is best for the airline financially.

20. Arthur does not explicitly teach selecting passengers for said flight such that when only one available seat on the commercial flight remains and two of said passengers without seats prefer to fly on the commercial flight and are equally ranked, the available seat is assigned to the one of said two passengers without seats having the higher financial value to the commercial airline and selecting passengers for said flight such that when one available seat on the commercial flight remains and two of said volunteers prefer to accept said incentive and are equally ranked (with emphasis), the one of said two volunteers having the higher lifetime value

is selected to be rebooked and receive the incentive. However, Quick Stats teaches the technique of resolving tie-breaking scenarios when there are two entities that are equally ranked and only one open position available. In this case, a second ranking system is used to assign the available opening to the entity with the higher ranked value. For example, Quick Stats teaches when there are two football teams that are tied in a division, a second ranking criteria is used to award the higher ranked team the division title (Quick Stats: pgs. 1-2). This known technique is applicable to the passenger overbooking system and method of Arthur as they both share characteristics and capabilities, namely, they are directed to tie-breaking scenarios.

21. **As per claims 2 and 17**, Slivka in view of Ingram and further in view of Arthur discloses the method and computer-readable storage of claims 1 and 16 as described above. Slivka further discloses the passenger data comprises a frequent flyer status of the passenger (Slivka: Table 1; paragraph 0024, “rules engine 113 may associate a data code reflecting a type of travel status of a passenger, such as a frequent flyer status.”; paragraphs 0033-0035).

22. **As per claims 3, 15, and 18**, Slivka in view of Ingram and further in view of Arthur discloses the method, system, and computer-readable storage of claims 1, 14, and 16 as described above. Slivka further discloses passenger data is passenger financial data (Slivka: paragraphs 0033-0035; 0037-0038).

23. **As per claims 4 and 19**, Slivka in view of Ingram and further in view of Arthur discloses the method and computer-readable storage of claims 3 and 18 as described above. Slivka further discloses passenger financial data comprises a remaining flight ticket value of each denied boarding candidate (Slivka: paragraphs 0035; 0037-0038).

24. **As per claim 6**, Slivka in view of Ingram and further in view of Arthur discloses the method and machine readable storage of claim 3 as described above. Slivka further discloses passenger financial data comprises passenger lifetime value data (Slivka: paragraph 0006, "...value established by airlines, ancillary services, and/or commodities, such as hotel and car reservations."; 0033-0035; 0037-0038).

25. **As per claims 10 and 23**, Slivka in view of Ingram and further in view of Arthur discloses the method and computer-readable storage of claims 1 and 16 as described above. Slivka further discloses the comparing step comprises applying a predetermined a set of rules (Slivka: paragraphs 0024-0026).

26. **As per claims 12 and 25**, Slivka in view of Ingram and further in view of Arthur discloses the method and computer-readable storage of claims 1 and 23 as described above. Slivka further discloses the ranking comprises arranging said passengers according to passenger frequent flyer status (Slivka: paragraph 0024, "rules engine 113 may associate a data code reflecting a type of travel status of a passenger, such as a frequent flyer status."; paragraph 0026, "...rules that rank certain types of passengers.").

27. **As per claims 13 and 26**, Slivka in view of Ingram and further in view of Arthur discloses the method and computer-readable storage of claims 1 and 23 as described above. Slivka further discloses the ranking comprises said passengers according to passenger lifetime value data (Slivka: paragraphs 0037-0038; 0046).

28. Claims 11 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Slivka et al., U.S. Publication No. 2003/0225600 in view of Ingram, "Travellers Leave for Portugal

after 24-hour Wait for Plane”, The Globe and Mail (Canada), June 26, 1986, pg. A21 in view of Arthur et al., “Optimal Overbooking”, The UMAP Journal 23(3), 2002, pg. 283-300 and further in view of Boies et al., U.S. Publication No. 2002/0082878.

29. **As per claims 11 and 24**, Slivka in view of Ingram and further in view of Arthur discloses the method and computer-readable storage of claims 10 and 23 as described above. Slivka in view of Ingram and further in view of Arthur does not disclose arranging passengers according to a descending revenue impact to the airline.

30. Boies teaches arranging passengers according to a descending revenue impact to the airline (Boies: Fig. 4, “430” - The Examiner notes, passengers are arranged by seat class or in descending revenue impact to the airline.).

31. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method and computer-readable storage of Slivka in view of Ingram and further in view of Arthur to have included arranging passengers according to a descending revenue impact to the airline as disclosed by Boies for the advantage of reassigning passengers to different seats within their guaranteed category of seating in order to satisfy a subsequent passenger’s request (Boies: paragraph 0008).

Conclusion

The Examiner has cited particular portions of the references as applied to the claims above for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that the Applicant, in

preparing the responses, fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Liou whose telephone number is (571)270-1359. The examiner can normally be reached on Monday - Friday, 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric Liou/
Examiner, Art Unit 3628

/JOHN W HAYES/

Supervisory Patent Examiner, Art Unit 3628